THOMAS (T.G.)

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PROPHYLACTIC TREATMENT

OF

PLACENTA PRÆVIA.

BY

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Ever since the days of Paul Portal, who lived in the latter half of the seventeenth century, that form of inevitable hemorrhage which attends upon the implantation of the placenta over or near to the os internum uteri, and which at the end of gestation proves so fatal to both mother and child, has attracted special attention. Before his time many had noticed the fact that in numerous cases in which serious ante-partum hemorrhage existed, the placenta was distinctly to be felt at the os internum and often at the os externum; but all had taken it for granted that this organ had originally been implanted near the fundus, and becoming detached from this point, had fallen down to the cervical region.

But even long after this time the fact once fully demonstrated was lost sight of, and the great obstetric lights of the eighteenth century—Daventer, Giffard, Roederer, Smellie and

Levret—had, through ignorance of Portal's labors, to grope their way to the truth. Very near to it did Daventer come when he noticed the firm adhesion of the placenta to the wall of the cervical surface against which he found it, so that one might take it for an outgrowth from the part. But he regarded this adhesion as due to the cohesive power exerted by coagulated blood, and did not recognize the great essential pathological fact upon which all the therapeutic resources applied under these circumstances should rest for their efficiency. The others mentioned re-discovered Portal's discovery.

Portal recorded eight cases of placenta prævia. In seven of these he practiced version; and in one the child's head burst its way through the obstructing mass. In one case having introduced his hand into the vagina he describes what he discovered in these words: He "found the after-burden placed just before and quite across the whole inner orifice, which had actually been the occasion of the flux of blood; for by the opening of the orifice the said after-burden then being loosed from that part where it adhered to before, and the vessels containing the blood torn and open, produced this flooding, which sometimes is so excessive as proves fatal to the woman unless it be speedily prevented." To Portal, then, we are indebted for the great pivotal fact around which have clustered, at a later period, the excellent results obtained by the labors of Giffard, Levret, Smellie, Roederer, Leroux, and Rigby; and, more recently still, those of Simpson, Barnes, and Greenhalgh.

Since the true pathology of these cases has been fully comprehended, obstetricians in succeeding ages have never ceased in their efforts at establishing a plan of managing them which would combat the great dangers attending them for mother and child. Fortunately we can now positively assert that the statement made by Dr. Renton,* just forty years ago, that "Portal, in 1672, knew as much on the subject of uterine hemorrhage occasioned by the displacement of the placenta

* Edinburgh Medical and Surgical Journal, July, 1837.

from the os uteri, and the practice necessary for its suppression, as we do at the present time," is incorrect. Since that period the tampon (introduced by Leroux one hundred years ago), vaginal and cervical water-bags, rupture of the membranes, and complete and partial separation of the placenta, have all been added to our means of controlling this dangerous complication of parturition.

Even now, however, we have by no means arrived at a point at which we can rest from our labors with a feeling that we have at our disposal means by which, under these circumstances, the danger of death can be with any degree of certainty warded off from either mother or child. Danger—manifest, inevitable, and treacherous in its approach—attends upon every case of placenta prævia. That it is susceptible of great diminution by skillful management, is an admitted fact; but in many cases it presents itself when the services of the practitioner are not attainable, and a fatal loss of blood may occur before they become so. No skill, no watchfulness, no caution, can, in the great majority of cases in private practice, prevent the possibility of a sudden separation of a portion of placenta, and a consequent sudden flow, when the patient is unable, for one or even for several hours, to obtain medical attention. During this time of anxious and hazardous waiting two lives may be lost, those in attendance being utterly powerless to aid the bleeding woman and perhaps smothering child.

Labor once being established, the means at our disposal for controlling hemorrhage, with its double danger, may all be classed under two heads: first, those effecting control of the flow while the os dilates, those in other words which enable us to await the progress of labor without serious risk to life; and second, those which, disregarding the flow of blood, are addressed to a delivery of the child, so rapid that it may be accomplished before this flow can effect a fatal result. The cervix uteri represents a strait through which the child must, sooner or later, necessarily pass; and this strait has, in the attached placenta, an element of great danger which will be made

active by such passage. The child, in its passage of this point, may be likened to a man who needs must pass a narrow portion of a defile where an inevitable, unavoidable danger awaits him. With this he may deal in two ways, which differ entirely from each other: first, he may resort to measures for suppressing the danger which he can not remove, while he passes onward at his leisure; second, he may use no means for such suppression, but trusting to a bold dash he may rely for safety upon the rapidity of a determined advance and rush past the point of danger.

To state the matter, in reference to placenta prævia, in other words: first, we may alter the state of affairs at the cervix, so that dilatation may occur without hemorrhage; second, we may hasten the delivery of the child, and render a gradual dilatation of the cervix unnecessary by rapid and immediate removal.

The means at our command for accomplishing these indications may thus be tabulated and presented at a glance:

Means for controlling hemorrhage while the os dilates.

1. Distention of cervix by water-bags.
2. Evacuation of liquor amnii.
3. Partial detachment of placenta.
4. Complete detachment of placenta.
5. The tampon or colpeurynter.

Means for hastening delivery of child.

1. Ergot.
2. Version.
3. Forceps.
4. Craniotomy.

The means at our disposal for fulfilling both these indications are very efficient, and yet they leave a vast deal to be desired. They leave an hiatus which never can be filled, for the reason that great danger attends sudden losses of blood occurring at uncertain periods for two or three months before labor sets in. Even admitting that the means just mentioned are almost perfect, until some method of control can be established for those almost inevitable and often dangerous antepartum flows of blood, the element of danger attendant upon

this period of utero-gestation can not be removed. And of what means can the most sanguine ever hope to avail himself to control the separation of placenta from uterus, at this time and under these circumstances?

Something more is surely wanting than means for conducting to a favorable issue a labor, complicated by placenta prævia, which has once begun. Some safeguard is required against the dangers of the three last months, which develop themselves unexpectedly, when no medical aid is at hand, and work their results so rapidly that it usually can not be obtained until great mischief has been done.

Let us pause here for a brief examination of the statistics of placenta prævia, as regards mothers and children. It is a well known fact that such statistics are very unreliable, and special doubts have been recently cast upon those relating to this subject. Why the statistics relating to placenta prævia should be less reliable than others, it is difficult to conceive. At least this much we may safely deduce from them, an approximate idea of the degree of danger attending the condition. So serious are its results that, although it occurs not oftener than once in five or six hundred cases, which is the proportion computed as correct by some authors, it exerts a marked influence upon the statistics of obstetrics. According to the calculation of Sir James Simpson, based upon the analysis of three hundred and ninety-nine cases, one-third of the mothers and over one-half of the children are supposed to have been lost; and Read, in his admirable essay, computes the mortality as one in four and a half mothers, while a large majority of the children are lost.

Surely these statistics offer us no reason for relaxation of effort, no grounds for satisfaction with what has been attained by the successors of Portal, no inducement for believing that our present resources are equal to the demands made upon them by this dangerous complication of parturition. And why are these inherent dangers of placenta prævia so active and so prolific in fatal consequences? Let me reply to the question by three formulated statements:

First. The dilatation of the cervix for the passage of the child, unavoidably exposes both mother and infant to great danger from placental detachment and hemorrhage.

Second. Repeated hemorrhages occurring during the three last months of pregnancy; the woman at the time of labor is usually exsanguinated, exhausted, and depressed both physically and mentally.

Third. Profuse flooding generally occurring with the commencement of labor; the medical attendant is often not at hand, and reaches his patient only after a serious, perhaps a fatal, loss of blood has occurred.

There is but one method at present at the disposal of the obstetrician by which the evils attendant upon the three last months of utero-gestation, and upon labor thus complicated, can be avoided. It is the induction of premature delivery after the period of viability of the child. By this procedure a rational, and it appears to me a perfectly warrantable, means of avoidance of a great danger is offered to us; one which presents in itself no dangers comparable with those of non-interference, and one which, while it removes the absolute hazards attendant upon delay, relieves that wearing anxiety which harasses patient, friends and physician.

Fortunately this condition is usually announced during the last months of utero-gestation by premonitory signs of reliable character, and thus we may empty the uterus before the vital forces of both mother and child are exhausted by hemorrhages, the results of repeated detachments of the placenta. My conviction is that, in every case of undoubted placenta prævia, in which the flow of blood threatens, by its amount or frequent recurrence, the loss of mother and child, premature delivery should be induced. What objection can be urged against it, other than that a child of less than nine months of intra-uterine life does not have as good a prospect of life as one which has arrived at full term? In the case which we are considering, even this is invalidated by the fact that an eight-months' child out of the uterus, and depending upon pulmonary respiration, has a decidedly brighter pros-

pect for life than one in that cavity depending for aëration of its blood upon a crippled and bleeding placenta. For the mother, how incomparably greater the safety which attends an emptied and contracted uterus! By inducing delivery during the ninth month of pregnancy, we should be dealing with a woman who is not exhausted by repeated hemorrhages; we would be in attendance at the moment of cervical dilatation, and consequently the moment of danger; and we would be able by hydrostatic pressure to control hemorrhage in great degree, while at the same time the period of dilatation of the cervix, which constitutes the time of maximum danger, may be rapidly accomplished. Under these circumstances, in the words of Angus McDonald, "nothing can be gained by delay, if we are satisfied that the bleeding is really serious, and if continued would lead to great risk to the mother's life and health."

With these considerations before me, and with a certain amount of experience to support them, I can not resist the conviction that, when premature delivery becomes the recognized and universal practice for placenta prævia, the statistics of the present day will be replaced by others of a far more satisfactory kind.

I freely admit that this must be proved hereafter by absolute clinical demonstration; and one of the objects of this paper is to offer a small amount of such proof. As freely do I admit, too, that evil may arise from an injudicious and unwarrantable resort to this plan of treatment in cases of a character too trivial to call for such radical interference. But does not this objection apply to every resource in surgery? The method being a good one, we must rely for its judicious application upon the good sense and conservatism of the individuals who resort to it. There is not an operation in obstetric surgery which is not sometimes performed upon insufficient grounds, and to the detriment rather than the benefit of the patient in whose behalf it has been invoked. So will it be with this measure. But let the misguided practitioner bear the burden of his own error; the operation should not be made to do so for him.

Upon those practitioners who have used with satisfaction the tampon until version has become practicable, and who, in reliance upon these excellent and efficient means, set their faces against the innovation here advocated, I would urge a thoughtful consideration of the statistics of placenta prævia. Accepting those offered us by Simpson, Read and Trask, approximatively, the prognosis for the mother is about as grave as that of patients submitted to the capital operation of ovariotomy. For the child it is much graver. We must, therefore, either regard the statistics to which I have made allusion as utterly worthless and unreliable, for which conclusion no warrant whatever exists; or we must admit that the claims of any means which offers immunity, to any decided degree, from the ordeal of so dangerous a parturition and labor, should be most carefully weighed before being thrown aside.

Five years ago a practitioner in this city, a man of very large obstetric experience and decided views as to practice, consulted me about a case of placenta prævia. His patient, a multipara, had, during the eighth month of utero-gestation, had repeated and severe losses of blood. Though much weakened by these she had, at the time of my becoming connected with the case, arrived at the end of the first week of the ninth month. Every symptom, both rational and physical, pointed to the existence of placenta prævia, and I urged premature delivery upon these grounds: First, the child was alive and might now be saved, while it ran greater risks than those attendant upon this process from hemorrhages which were sure to occur during the next three weeks. Second, the mother had bled very profusely, and might at any time bleed to death, or at least to a point of anæmia which would render even natural delivery dangerous. Third, even if the pregnancy could be carried to term, it was almost certain that during labor so severe a loss of blood would occur that version would become necessary, which would, in the exsanguinated condition of the patient, prove a dangerous resource.

I pressed these considerations strongly, but without avail.

The doctor had relied heretofore, through a long practice, upon the tampon and version, and would rely upon them now; the bridge that had so often borne him in safety would probably do so now. He agreed, however, to compromise the matter thus: the husband was to seek him instantly in case of another alarming hemorrhage; he would send at once for me, and we would empty the uterus forthwith. In forty-eight hours from that time, at three o'clock in the night, the husband was awakened by a cry from his wife that she was flowing freely. As rapidly as possible he went for the doctor, and then for me; but over an hour was consumed before we could reach the patient, owing to the necessary delay in dressing on the part of the husband and ourselves, and the time occupied in traversing the distance between our own houses and that of the patient. Arriving there we found her lying dead in a mass of blood, which filled the bed and dripped through the mattress in a stream. The child was at once delivered in the forlorn hope that it might still be alive, but it likewise was dead. The placenta was found to be centrally attached.

It may very pertinently be asked whether I believe that premature delivery, practiced when I urged its adoption forty-eight hours before this, would have saved one or both of these lives? I unhesitatingly reply, I do; in all probability the life of the child, and almost surely that of the mother. I do not say that I feel sure of this, but I do say that such is my decided belief, based upon no theory worked out in the closet, but upon experience founded upon clinical facts, which will close this essay.

A few words now upon the history of the introduction into practice of the use of premature delivery as a means of prophylaxis in placenta prævia. In 1864 Dr. Robert Greenhalgh, of London, read before the Obstetrical Society of that city an essay entitled "Practical Remarks upon the Treatment of Placenta Prævia, with illustrative cases," in which he advocated this practice. Judging by some of the statements made in

the discussion to which this essay gave rise, we must believe that the practice was a recognized one in Great Britain before this time. Dr. Barnes agreed "generally in the proposition that it was desirable to bring on labor in cases of flooding due to placenta prævia." Dr. Hicks "quite agreed with Dr. Greenhalgh as to the necessity of inducing labor in placenta prævia as soon as arrangements could be made, which he believed to be the plan adopted by all who saw much midwifery in this city; it was the practice he had always adopted." Dr. Hewitt considered the "principle enunciated in the paper now read, of the necessity of interference in cases of placenta prævia, to be one of great value. This principle had never been sufficiently insisted on, and although admitted by men of experience, it had not been laid down as a principle in the obstetric text-books." Dr. Beatty, of Dublin, declared that "in this respect (premature delivery) there was not much difference between his (Dr. Greenhalgh's) and the practice very usual in Dublin." Dr. Oldham, the president of the society, "also agreed that it was important to take steps at once in any case of placenta prævia to accomplish delivery; a plan, he thought, admitted by most practitioners in London, and one upon which he had always acted."

And yet I know of no work, essay, or text-book, which gave this advice at any time previous to the appearance of Greenhalgh's paper. He too, practicing in London and associating freely with his professional brethren, seems evidently to have looked upon the plan which he proposed as entirely an innovation. With the proof at present before us, it appears to me that to Greenhalgh belongs the credit of systematizing and formulating this method of managing placenta prævia.

Four years after this (1868), ignorant of the fact that I had been anticipated by Greenhalgh, and imagining myself to be the pioneer in the practice, I published, in the first issue of the New York Obstetrical Journal, a paper entitled "the History of Eight Cases of Placenta Prævia," in which I advocated this procedure, and gave several cases illustrative of it. In 1875 Angus McDonald, of Edinburgh, published a good essay

upon the subject in the Obstetrical Society's Transactions of that city; and in 1875 and '76, articles indorsing the method appeared in the American Practitioner from the pen of its able editor.

I have now resorted to premature delivery in eleven cases of placenta prævia; and although some of them have already appeared in print, I lay them all before my readers as embodying the sum total of the premises from which the deductions of this paper are drawn.

Case I. Mrs. W., aged twenty-six, primipara, in good health, was suddenly taken with hemorrhage three months before full term. She sent for me in great haste, but being occupied I was unable to go to her, and she was seen for me by my friend, Dr. Reynolds. He discovered that she had lost a few ounces of blood, but that the flow had ceased. Three days afterward she was again affected in the same way, the flow ceasing spontaneously. About a week after this she was taken during the night with a flow, which was so profuse as to result in partial syncope when she endeavored to walk across the room. I saw her early the next morning; found her flowing slightly, and upon vaginal examination succeeded in touching the edge of the placenta through the os, which was dilated to the size of a ten-cent piece. Later in the day Drs. Metcalfe and Reynolds saw her, and agreed with me in the propriety of premature delivery. In accordance with this determination, at 7 P. M. I introduced into the cervix, with considerable difficulty and by the employment of some force, the smallest of Barnes's dilators. This was followed in twenty minutes by the next larger dilator, and in an hour by the largest. Dilatation was rapidly accomplished, but instead of removing the largest bag, I left it in the cervix until ten o'clock that night. Expulsive pains coming on at that time I removed it, when the head rapidly engaged, and before morning Mrs. W. was safely delivered of a living girl. The placenta followed rapidly, and both mother and child did well.

In this case, though hemorrhage continued slightly throughout the labor, it never amounted to a sufficient quantity to endanger the lives of either mother or child. The implantation of the placenta being lateral, cessation of the flow occurred as the head advanced and made firm pressure against the bleeding surface. As to the fact of the case being one of placenta prævia, there could be no doubt. The placenta was distinctly touched by Drs. Metcalfe and Reynolds and myself; one lip of the cervix was disproportionately developed, and the placental murmur was much more distinct over the symphysis than near the fundus.

Case II. Mrs. D., a lady over forty years of age, whose last pregnancy had been completed fourteen years previously, was placed under my care by Dr. Metcalfe. She was an excessively nervous and hysterical woman, but in good health. About three weeks before full term she was taken with hemorrhages, which lasted for very short periods, recurred at intervals of four or five days, came on without assignable cause, and ceased without remedies. The cervix was not dilated, and no physical signs of placenta prævia could be detected either by vaginal touch or auscultation. Dr. Metcalfe saw her in consultation, and as all the rational signs of placenta prævia were present, and our patient was suffering from the repeated losses, and becoming extremely nervous and apprehensive, we concluded to bring on premature delivery. Accordingly at 11 A. M. I introduced a large sponge-tent into the cervix, and at 3 or 4 P M. removed it, and succeeded in inserting Barnes's smallest dilator. At nine o'clock that night the cervix was fully dilated, very slight hemorrhage having taken place, and Dr. Metcalfe being present, I removed the bag, intending to leave the case to nature, provided no flow occurred. Previously during the evening, upon changing the bags, I had distinctly touched the head at the presenting part; but now, to my surprise, I found that the bag impinging on this part had caused the child to revolve in the liquor amnii, and that the breech was within the os. We decided, under these circumstances, to deliver at once. The patient being put under the influence of ether, I drew down the legs and delivered a living female child. The placenta followed in fifteen minutes, and both patients did well, the child rapidly recovering from an injury to one of its legs received during delivery.

In this case the placenta was very nearly centrally attached. At one side of the os internum, a space of only two fingers' breadth was free. Through this digital examinations were made, and the hand pushed to seize the feet. The first stage being accomplished by means of the hydrostatic dilators, no hemorrhage attended it; but without the employment of this means, it is highly probable that profuse and dangerous flooding would have occurred.

Case III. Mrs. L., a multipara, aged thirty-five years, was placed under my care by Dr. W. H. Van Buren. Although not yet advanced much beyond the seventh month of pregnancy, she had often recurring attacks of hemorrhage, which behaved precisely like those of placenta prævia. The patient was intractable, fretful and unreasonable, to such a degree that I found much difficulty in examining very completely, and to this circumstance I, in part, attribute the fact that no physical signs of the condition could be detected. After attending her for a week, I was suddenly called to her and found that she had lost so much blood as to be alarmingly prostrated. I at once introduced a Sims's speculum, and applied a firm tampon of wet cotton. This was removed in twelve hours, and replaced by another. Before the removal of this full doses of ergot were administered, and in a few hours a still-born child, with placenta and membranes, was cast off. The mother recovered slowly.

Case IV. Dr. Metcalfe requested me to see with him Mrs. D. R., of whom he gave me the following history: She was a multipara, in good health, and in the eighth month of pregnancy. Without assignable cause she was affected by recurring hemorrhages of considerable violence, for which he had been forced to use the tampon. Upon my seeing her we agreed to employ the colpeurynter, Barnes's dilators not being attainable, and it was faithfully tried. For a time it would control the flow, but it excited violent efforts of the abdominal muscles without bringing on labor. In four or five days the patient became so much exhausted that we were apprehensive as to the result. The os was half dilated, fetal heart inaudible, and hemorrhage occurring at intervals. The patient was anæsthetized with ether, and Dr. Metcalfe passed his hand slowly into the cervix and removed the entire placenta. After this all flow ceased; the child was delivered in twenty-four hours, and the patient recovered without a bad symptom.

Case V. I was called on the 14th of November, by Dr. Keeney, to see with him Mrs. R., a multipara, aged twenty-three years, who was nearly at the end of the seventh month of pregnancy. About one week before our visit she had been suddenly seized with quite a profuse hemorrhage, which had rapidly diminished, but never completely disappeared. The nature of the flow, which occurred by sudden gushes in great profusion, led us to the conclusion that it was due to placenta prævia; but as the period was not favorable to the viability of the child, we determined to avoid interference until the eighth month, if possible. The patient was accordingly kept quiet in bed, and all effort avoided. For two weeks and a half this plan appeared to succeed, and we had strong hopes of reaching a period when both mother and child might be saved by premature delivery. When the seventh month and one week of the eighth had passed, the flow returned, and continued so steadily that, to our regret, we were forced to empty the uterus in the interest of the child, which was evidently becoming much enfeebled by gradual placental detachment, as well as of the mother, who likewise felt the loss of blood very perceptibly. At this period Dr. Keeney and I met at the patient's house at half past eight o'clock in the evening. At twenty minutes before nine, I introduced Barnes's smallest dilator. At ten minutes after nine the os was fully dilated, and I, introducing my hand, readily delivered a living child by version. The child was evidently very feeble, and although at once wrapped in cotton and surrounded by an atmosphere heated to ninety-five degrees, it lived only about nine or ten hours.

In this case, as soon as the os was fully dilated, we could distinctly feel the placenta; and as I passed up my hand I found that it was centrally attached. The mother made an excellent recovery.

Case VI. Mrs. P., a multipara, aged thirty-eight, had advanced, without any unfavorable symptoms, to the middle of the ninth month of pregnancy. At this period, while sitting, at 9 P. M. in her parlor, engaged in some light needle-work and in conversation, she suddenly felt a free flow of blood pouring away from the vagina. In a few moments she became very much exhausted, and was lifted

up by her husband and carried upstairs to bed. I saw her within an hour after this, and found her still losing blood to a slight extent. Her pulse was very rapid and weak, and her face extremely pallid. It was estimated that about one quart of blood had passed, though this was of course uncertain.

As the flow had ceased after I had kept the patient quiet for an hour, I left the house, promising an early visit in the morning. Upon this visit I found her doing well, though somewhat exhausted. Having satisfied myself that placenta prævia existed, I now explained the state of affairs to my patient's husband, and requested Dr. Metcalfe to see her in consultation. He agreed with me that the probability of the safety of both mother and child would be greatly increased by at once inducing premature delivery, and at nine o'clock that night I set about accomplishing it. At half past nine exactly, in the presence of Dr. Metcalfe, I introduced into the cervix the smallest size of Barnes's dilators, and at half past ten the os was fully dilated. So long as the bag was retained in the cervix, no hemorrhage occurred, but on the instant of its removal a flow took place. Under these circumstances, it was thought best to deliver at once. The patient being put under the influence of chloroform, I performed bimanual version, and with great ease delivered a living child. The placenta soon followed, and mother and child recovered without an unfavorable symptom.

In this case delivery was accomplished in one and a half hours from the commencement of the effort, and the process was inaugurated just twenty-four hours after the development of the first symptom of danger. The flow which constituted this symptom was so sudden and alarming that we thought that great danger would attend delay, uncompensated by any corresponding advantage. After full dilatation and removal of the dilator, Dr. Metcalfe examined and found a very large piece of placenta hanging out of the os uteri, and thus the diagnosis was proved to have been correct.

Case VII. I present this partly in the words of Dr. Gilchrist, with whom I saw it in consultation: "Mrs. R., a primipara, ceased to menstruate about the 26th of May. On the 15th of October she had a slight hemorrhage, the show continuing for a day, followed by others on the 7th and 21st of November, 9th and 28th of January, and 16th of February; all coming on about four o'clock in the morning, lasting about the same length of time, and from one to two ounces each time. Friday morning, February 23d, on rising to void urine, she lost at least a quart of blood in a few minutes, stopping almost entirely as rapidly as it came. She had little, if any, on Saturday. On Sunday she had two gushes, losing nearly a pint each time, followed by a slight loss and some irregular pains, until Monday afternoon, when Dr. Thomas saw her with me in consultation."

I now continue the history. At the time when I saw Mrs. R. with Dr. Gilchrist, she was exceedingly exhausted from prolonged and copious losses of blood; and in view of the facts that she had still two weeks to go before reaching

the full period of gestation, that her child appeared to be still alive, and that it appeared highly improbable that either her strength, or that of her infant, would withstand other losses, I urged an immediate resort to premature delivery. At this time the edge of the placenta could be distinctly felt by the finger inserted into the cervical canal, and it was looked upon as almost certain that other losses would occur, Dr. Gilchrist, gladly accepting the proposal of premature delivery, inserted the smallest of Barnes's dilators at eight o'clock that night. At half past nine, the second size was inserted; and at ten o'clock he sent for me declaring that the patient's condition was a very unsatisfactory one. When I met him at this time I found that, without creating hemorrhage, he had accomplished a good, though not complete, dilatation of the os. But the patient had become very nervous, and was tossing her arms from side to side; the respiration was sighing, pulse small and rapid, and some loss of blood was occurring. The outlook for a lengthy labor was very bad; so with Dr. Gilchrist's concurrence I at once introduced the largest dilator, and having fully dilated the os externum, gently turned by the bimanual method, and delivered a fine boy. The child did perfectly well, and the mother slowly recovered. Her health, in the course of a month, was remarkably good when the great loss of blood which she sustained was taken into consideration.

Case VIII. I was called by Dr. T. M. Markoe to see with him Mrs. A., a multipara, who was in the last month of pregnancy. Four weeks before I saw her she had had a profuse uterine hemorrhage, and this had been repeated with considerable regularity about every five days until the night previous to my visit, when the fifth flow had occurred. The patient was greatly exsanguinated, and as we satisfied ourselves, by a careful examination of the rational and physical signs, that placenta prævia existed, and that still more profuse losses would almost surely occur, we decided upon interrupting the process of gestation. In view, however, of the very exhausted state of our patient, we agreed to wait four days before doing this. At this time, in the presence of Drs. Markoe and Delafield, I dilated the cervix with water-bags, and as a decided flow of blood attended this process throughout, we decided to turn. This I succeeded in doing, ripping the placenta away from the cervix to which it was centrally attached, and delivered a still-born male child. Then I at once delivered the placenta. The mother did well, with the exception of a slight attack of phlegmasia dolens, which did not last long.

A more aggravated case of cervical attachment of the placenta than this never presented itself to me. Whether the child's life was lost during the delivery, or whether it was destroyed by the previous hemorrhages, I am unable to say.

Case IX. Mrs. T., multipara, at the end of the eighth month of pregnancy, was put under my care by Dr. H. B. Sands, for a condition which he regarded as placenta prævia. During the seventh and eighth months of pregnancy she had, at intervals, suffered from temporary but profuse losses of blood, which, with the physical signs present, led me to agree in Dr. Sands's diagnosis. For a week

after I saw the patient she was carefully watched for me by Dr. Charles S. Ward, and as during this time very decided hemorrhage occurred, and the patient was becoming much exsanguinated, premature delivery was decided upon. Dilating the cervix fully with Barnes's dilators, I slipped up between the membranes and uterus a gum-elastic catheter, even after it was put in place keeping a dilator in the cervix. In three or four hours labor pains were developed, very little blood having been lost, and under the supervision of Dr. Ward the patient was safely delivered of a vigorous male child. The child did well, but in forty-eight hours after delivery puerperal septicæmia developed itself in the mother, of which she died. One month after this Dr. Sands attended a sister of this lady in the same house, who, after a perfectly natural labor, died of puerperal fever.

CASE X. Mrs. C., wife of an army officer, a primipara, living in the suburbs of New York, sent for me in great haste, in the early part of the eighth month of pregnancy, on account of a uterine hemorrhage which had occurred during the night without assignable cause. When I reached her the hemorrhage had ceased, but as it recurred with some violence three times during the following month, and as the physical signs led me to believe that placenta prævia existed, I induced premature labor when the pregnancy was eight months and a half advanced, and had the good fortune to deliver a living, though greatly enfeebled, child. Mother and child both did well, and the former, who has borne several children since, has had no repetition of this dangerous experience.

CASE XI. I was called, by the late Dr. J. J. Connolly, to see with him Mrs. M., a young Irishwoman, wife of a mechanic, in whose case he had diagnosticated, on account of frequent hemorrhage and the ordinary physical signs, placenta prævia. Upon examination of the case I fully agreed with him, and as the patient was now advanced to the eighth and a half month of pregnancy, was becoming greatly exhausted, and the child appeared to be dead, we decided upon premature delivery. This was induced by Barnes's dilators and uterine catheterization. A still-born child was delivered, and the mother recovered without a bad symptom.

In this case the placenta was attached laterally, where it could be distinctly felt after dilatation of the canal. While compression was made by the water-bag a little hemorrhage occurred from it; but as soon as the membranes were ruptured, and the head made pressure against it, this ceased entirely.

From this enumeration of cases I have excluded all in which means were adopted for expediting labor after it had been established from natural causes. I have confined myself strictly to cases in which the labor was induced as a prophylactic measure in placenta prævia.

NEW YORK CITY.